



| USPTO Form 1449 U.S. Department of Commerce<br>Patent and Trademark Office |    |                 |                    | Attorney Docket No.<br>4231/2055N |       | Serial No.<br>10/812,707 |             |
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| INFORMATION DISCLOSURE STATEMENT   |    |                 |                    | Applicant(s): Choong-Chin Liew    |       |                          |             |
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| U.S. PATENT DOCUMENTS  |    |                 |                    |                                   |       |                          |             |
| Examiner Initial   |    | Patent No.      | Date               | Name                              | Class | Subclass                 | Filing Date |
|  | 1  | 6,190,857       | February 20, 2001  | Ralph et al.                      |       |                          |             |
|  | 2  | 6,218,529       | April 17, 2001     | An et al.                         |       |                          |             |
|  | 3  | 6,277,574       | August 21, 2001    | Walker, et al.                    |       |                          |             |
|  | 4  | 5,853,996       | December 29, 1998  | Mordechai, et al.                 |       |                          |             |
|  | 5  | 6,251,590       | June 26, 2001      | Schweighoffer et al.              |       |                          |             |
|  | 6  | 5,882,864       | March 16, 1999     | An et al.                         |       |                          |             |
|  | 7  | 5,942,385       | August 24, 1999    | Hirth                             |       |                          |             |
|  | 8  | 6,479,263       | November 12, 2002  | Slawin et al.                     |       |                          |             |
|  | 9  | 6,048,709       | April 11, 2000     | Falb et al.                       |       |                          |             |
|  | 10 | 6,124,433       | September 26, 2000 | Falb, et al.                      |       |                          |             |
|  | 11 | 6,486,299       | November 26, 2002  | Shimkets                          |       |                          |             |
|  | 12 | 6,525,185       | February 25, 2003  | Fan, et al.                       |       |                          |             |
|  | 13 | 5,352,775A      | October 4, 1994    | Albertson et al                   |       |                          |             |
|  | 14 | 5,837,449       | November 17, 1998  | Monia et al.                      |       |                          |             |
|  | 15 | 2003/0104393 A1 | June 5, 2003       | Sharp, Frank R. et al.            |       |                          |             |
|  | 16 | 6,642,002       | November 4, 2003   | Loyd, et al.                      |       |                          |             |
|  | 17 | 6,630,301       | October 7, 2003    | Gocke, et al.                     |       |                          |             |
|  | 18 | 6,692,916       | February 17, 2004  | Bevilacqua et al.                 |       |                          |             |
|  | 19 | 6,521,420       | February 18, 2003  | Herman, et al.                    |       |                          |             |

JSW 5/3/07

|    |              |                    |                        |  |  |  |
|----|--------------|--------------------|------------------------|--|--|--|
| 20 | 2003/0224374 | December 4, 2003   | Dai, HongYue et al.    |  |  |  |
| 21 | 2002/0142981 | October 3, 2002    | Horne, Darci T. et al. |  |  |  |
| 22 | 2003/0180743 | September 25, 2003 | Nagasu et al.          |  |  |  |
| 23 | 2004/0121390 | June 24, 2004      | Sharma et al.          |  |  |  |
| 24 | 5,739,432    | April 4, 1998      | Sinha                  |  |  |  |
| 25 | 6,607,898    | August 19, 2003    | Kopreski, et al.       |  |  |  |
| 26 | 6,617,170    | September 9, 2003  | Augello, et al.        |  |  |  |
| 27 | 5,352,775    | October 4, 1994    | Albertson et al..      |  |  |  |
| 28 | 5,837,449    | November, 17, 1998 | Monia et al.           |  |  |  |

## FOREIGN PATENT DOCUMENTS

| Examiner Initial | Document No.   | Publication Date   | Country | Class | Subclass | Translation Yes No |
|------------------|----------------|--------------------|---------|-------|----------|--------------------|
| 29               | DE 44 35 919 C | 07 DEC 1995        | GERMANY |       |          |                    |
| 30               | EP 0 534 640 A | 31 MAR 1993        | EPO     |       |          |                    |
| 31               | JP 09 187299   | 22 JUL 1997        | JAPAN   |       |          |                    |
| 32               | WO 98/18906    | 07 MAY 1998        | PCT     |       |          |                    |
| 33               | WO 98/24935    | 11 JUN 1998        | PCT     |       |          |                    |
| 34               | WO 98/33942    | 06 AUG 1998        | PCT     |       |          |                    |
| 35               | WO 98/49342    | 05 NOV 1998        | PCT     |       |          |                    |
| 36               | WO/01/25473    | 04/12/2001         | PCT     |       |          |                    |
| 37               | WO/03/040404   | 05/15/2003         | PCT     |       |          |                    |
| 38               | WO/02/14547    | Feb. 21, 2002      | PCT     |       |          |                    |
| 39               | WO/03/061564   | July 31, 2003      | PCT     |       |          |                    |
| 40               | WO/03/086445   | October 23, 2003   | PCT     |       |          |                    |
| 41               | WO/02/074986   | September 26, 2002 | PCT     |       |          |                    |
| 42               | WO/02/103320   | December 27, 2002  | PCT     |       |          |                    |
| 43               | WO/02/057414A2 | July 25, 2002      | PCT     |       |          | Front Page and     |

5/3/07 JS

|  |    |  |            |     |  |  | Abstract Only |  |
|--|----|--|------------|-----|--|--|---------------|--|
|  | 44 | WO/03/008647   | 01/30/2003 | PCT |  |  |               |  |
|  | 45 | WO/03/090694   | 11/06/2003 | PCT |  |  |               |  |
|  | 46 | WO/03/072827   | 09/04/2003 | PCT |  |  |               |  |
|  | 47 | WO/04/061410   | 07/22/2004 | PCT |  |  |               |  |
| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.) |    |  |            |     |  |  |               |  |
|  | 48 | Claudio, J.O. et al. (1998) <i>Genomics</i> 50:44-52   |            |     |  |  |               |  |
|  | 49 | Chelly J et al. (1989). <i>Proc. Nat. Acad. Sci. USA.</i> 86:2617-2621   |            |     |  |  |               |  |
|  | 50 | Chelly J et al. (1988). <i>Nature</i> 333:858-860.   |            |     |  |  |               |  |
|  | 51 | Drews J & Ryser S (1997). <i>Nature Biotech.</i> 15:1318-9.  |            |     |  |  |               |  |
|  | 52 | Ferrie RM et al. (1992). <i>Am. J. Hum. Genet.</i> 51:251-62   |            |     |  |  |               |  |
|  | 53 | Fu D-J et al. (1998). <i>Nat. Biotech</i> 16: 381-4.   |            |     |  |  |               |  |
|  | 54 | Gala JL et al. (1998). <i>Clin. Chem.</i> 44(3):472-81.  |            |     |  |  |               |  |
|  | 55 | Geisterfer-Lowrance AAT et al. (1990). <i>Cell</i> 62:999-1006.  |            |     |  |  |               |  |
|  | 56 | Groden J et al. (1991). <i>Cell</i> 66:589-600.  |            |     |  |  |               |  |
|  | 57 | Jandreski MA & Liew CC (1987). <i>Hum. Genet.</i> 76:47-53.  |            |     |  |  |               |  |
|  | 58 | Jin O et al. (1990). <i>Circulation</i> 82:8-16  |            |     |  |  |               |  |
|  | 59 | Kimoto Y (1998). <i>Mol. Gen. Genet.</i> 258:233-239.  |            |     |  |  |               |  |
|  | 60 | Koster M et al. (1996). <i>Nat. Biotech</i> 14: 1123-8   |            |     |  |  |               |  |
|  | 61 | Liew & Jandreski (1986). <i>Proc. Nat. Acad. Sci. USA.</i> 83:3175-3179  |            |     |  |  |               |  |
|  | 62 | Liew CC et al. (1990). <i>Nucleic Acids Res.</i> 18:3647-3651.   |            |     |  |  |               |  |
|  | 63 | Liew CC (1993). <i>J Mol. Cell. Cardiol.</i> 25:891-894  |            |     |  |  |               |  |
|  | 64 | Liew CC et al. (1994). <i>Proc. Natl. Acad. Sci. USA.</i> 91:10645-10649   |            |     |  |  |               |  |
|  | 65 | Liew et al. (1997). <i>Mol. and Cell. Biochem.</i> 172:81-87.  |            |     |  |  |               |  |
|  | 66 | Niimura H et al. (1998). <i>New Eng. J. Med.</i> 338:1248-1257   |            |     |  |  |               |  |
|  | 67 | Ogawa M (1993). <i>Blood</i> 81:2844-2853  |            |     |  |  |               |  |
|  | 68 | Riccie et al. (1997) <i>Neuroscience Letters</i> 229:130-134   |            |     |  |  |               |  |
|  | 69 | Santoro IM & Groden J (1997). <i>Cancer Res.</i> 57:488-494.   |            |     |  |  |               |  |
|  | 70 | Yuasa T et al. (1998). <i>Japanese J. Cancer Res.</i> 89:879-882   |            |     |  |  |               |  |
|  | 71 | Marshall KW (1996) <i>Journal of Rheumatology</i> 23(4):582-585  |            |     |  |  |               |  |
|  | 72 | Campbell, C.; Vernon, S.D; Karem, K.L. Nisenbaum, R. Unger, E.R.(2002) <i>Assessment of Normal Variability in Peripheral Blood Gene Expression. Disease Markers</i> , 18:201-206 |            |     |  |  |               |  |
|  | 73 | Yoshikai et al., "Genomic Organization of the Human Amyloid Beta-Precursor Gene" <i>Gene</i> 87:257-263 (1990)   |            |     |  |  |               |  |
|  | 74 | GENBANK AC:V00565, March 1995; Bell et al.: "Sequence of the Human Insulin Gene" (XP002141055)   |            |     |  |  |               |  |
|  | 75 | GENBANK AJ:003147, December 1998, Bernot et al., "A Transcriptional Map of the FMF Region" (XP002141057)   |            |     |  |  |               |  |
|  | 76 | GENBANK AC:M73548, January 1995, Joslyn et al., "Identification of Deletion  |            |     |  |  |               |  |


 5/3/07

|  |    |  |
|--|----|--|
|  |    | Mutations and Three New Genes at the Familial Polyposis Locus" (XP002141058)   |
|  | 77 | GENBANK AC:X52889, September 1993, Liew, "Complete Sequence and Organization of the Human Cardiac Beta-Myosin Heavy Chain Gene" (XP002141056)  |
|  | 78 | GENBANK AC:M54947, April 1993, Seidman et al., "Molecular Studies of the Atrial Natriuretic Factor Gene" (XP002141054)   |
|  | 79 | Nagai et al. "Decrease of the D3 dopamine receptor mRNA expression in lymphocytes from patients with Parkinson's disease," <i>Neurology</i> 46:791-795 (1996)  |
|  | 80 | Mattano et al. "Sensitive Detection of rRare Circulating Neuroblastoma Cells by the Reverse Transcriptase-Polymerase Chain Reaction" <i>Cancer Research</i> 52:4701-4705 (1992)  |
|  | 81 | Katz et al. "Molecular Staging of Prostate Cancer with the Use of an Enhanced Reverse Transcriptase-PCR Assay" <i>Urology</i> 43(6):765-775 (1994)   |
|  | 82 | Burchill et al. "Neuroblastoma cell detection by reverse transcriptase-polymerase chain reaction (RT-PCR) for tyrosine hydroxylase mRNA" <i>Int. J. Cancer</i> 57:671-675 (1994)   |
|  | 83 | Johnson PWM et al. "The molecular detection of circulating tumor cells", <i>British Journal of Cancer</i> 72:268-275 (1995), PAGES 268-276   |
|  | 84 | Seiden et al. Detection of Curculating Tumor Cells in Men with Localized Prostate Cancer <i>Journal of Clinical Oncology</i> 12(12):2634-2639 (1994)   |
|  | 85 | Moreno J.G. et al. "Detection of Hematogenous Micrometastasis in Patients with Prostate Cancer" <i>Cancer Research</i> 52:6110-6112 (1992)   |
|  | 86 | Hannon et al. NCCLS "Blood Collection on Filter Paper for Newborn Screening Programs; Approved Standard—Fourth Edition—NCCLS document LA4-A4 [ISBN 1-56238-503-8] NCCLS, 940 West Valley Road, Suite 1400, Wayne Pennsylvania 19087 USA (2003) Vol. 23 No.21. Pages 1-31                 |
|  | 87 | Ernst et al. NCCLS "Procedures and Devices for the Collection of Diagnostic Capillary Blood Specimens; Approved Standard—Fifth Edition. NCCLS document H4-A5 [ISBN 1-56238-538-0] NCCLS, 940 West Valley Road, Suite 1400, Wayne Pennsylvania 19087 USA (2004) Vol. 24 No.21. Pages 1-47 |
|  | 88 | Kopreski Michael, S. et al. August 1999, "Detection of Tumor Messenger RNA in the Serum of Patients with Malignant Melanoma", <i>Clinical Cancer Research</i> Vol 5: 1961-1965   |
|  | 89 | Vernon, S.D. et al; (2002) "Utility of the Blood for Gene Expression and Profiling and Biomarker Discovery in Chronic Fatigue Syndrome, <i>Disease Markers</i> , 18: 193-199   |
|  | 90 | Dasi, Francisco et al. (May 2001) <i>Real-Time quantification in plasma of human telomerase reverse transcriptase (hTERT) mRNA: A simple blood test to monitor disease in cancer patients.</i> <i>Laboratory Investigation</i> , Vol. 81, No. 5, p.767-769,                              |
|  | 91 | Fleischhacker, Michael et al. (Sept 2001) <i>Detection of Amplifiable Messenger RNA in the Serum of Patients with Lung Cancer</i> Annals. N Y Acad Sciences 945:179-188  |
|  | 92 | Gal, Shira et al. (Sept 2001) <i>Detection of Mammaglobin mRNA in the Plasma of Breast Cancer Patients</i> Annals, N Y Acad Sciences, 945:192-194  |
|  | 93 | Zhang, H.Q., Lu, H., Enosawa, S. Takahara, K. Sakamoto, T. Nakjima, H. S. and Suzuki, S. (2002) <i>Microarray analysis of Gene Expression in Peripheral Blood Mononuclear Cells Derived from Long-Surviving Renal Recipients</i> , <i>Transplantation Proceedings</i> 34 1757-1759       |
|  | 94 | Baechler, E.C., Batliwalla, F. M., Karypis, G. Gaffney, P.M.; Ortmann, W.A. Espe, K.J., Shark, K.B., Grande W. J. Hughes, K.M., Kapur, V., Gregersen, P.K.   |

5/3/07

|           |           |  |
|-----------|-----------|--|
| <i>BB</i> |           | and Behrens, T.W. (March 4, 2003) <i>Interferon-inducible gene expression signature in Peripheral Blood Cells of Patients with Severe Lupus</i> . PNAS 100 (5):2610-5.   |
|           | 95        | Lo, Y.M. Dennis (2001 Sept.) <i>Circulating Nucleic Acids in Plasma and Serum: An Overview</i> , Ann N Y Acad Scien 945: 1-7   |
|           | 95        | Ng, Enders K.O., Tsui, N.B.Y., Lam, NYL, Chiu, R.W.K., Yu, S.C.H., Wong, S.C.C., Lo, E.S.F., Rainer, T.H., Johnson, P.J., and Lo, Y.M.D. (August, 2002) <i>Presence of Filterable and Nonfilterable mRNA in the Plasma of Cancer Patients and Healthy Individuals</i> . Clin. Chem. 48(8):1212-1217      |
|           | 96        | Mengelle, C. Sandres-Saune, K. Pasquier, C. Rostaing, L. Mansuy, J-M, Marty, M. Da Silva, I., Attal, M., Massip, P. and Izopet, J. (Aug 2003) <i>Automated Extraction and Quantification of Human Cytomegalovirus DNA in Whole Blood by Real-Time PCR Assay</i> . J. Clin. Microbiology, 41(8):3840-3845 |
|           | 97        | Samuel DePrimo et al. (2003) <i>Expression profiling of Blood Samples from an SU5416 Phase II Metastatic Colorectal Cancer Clinical Trial: A novel strategy for biomarker identification</i> . BMC Cancer, 3(3): 1-12  |
|           | 98        | Taback B. et al. (Dec 15, 2001) <i>Detection of Occult Metastatic Breast Cancer Cells in Blood by a Multimolecular Marker Assay: Correlation with Clinical Stage of Disease</i> . Cancer Research, 61:8845-8850  |
|           | 99        | Schuster R. et al. (2003) <i>Quantitative Real-Time RT-PCR for Detection of Disseminated Tumor Cells in Peripheral Blood of Patients with Colorectal Cancer Using Different mRNA Markers</i> . Int. J. Cancer. 108:219-227   |
|           | 100       | Twine et al. (September 15, 2003) <i>Disease Associated Expression Profiles in Peripheral Blood Mononuclear Cells from Patients with Advanced Renal Cell Carcinoma</i> . Cancer Research, 63:6069-6075   |
|           | 101       | Vawter M. et al. (2004) <i>Microarray screening of lymphocyte gene expression differences in a multiplex schizophrenia pedigree</i> , Schizophrenia Research, 67 (2004):41-52  |
|           | 102       | Neumann et al. (Jan 2002) <i>Identification of differentially expressed genes in rheumatoid arthritis by a combination of complementary DNA array and RNA arbitrarily primed-polymerase chain reaction</i> . Arthritis Rheum. 46(1):52-63.   |
|           | 103       | Schwering, I. et al. (2003) <i>Profiling of Hodgkin's lymphoma cell line L1236 and germinal center B cells: identification of Hodgkin's lymphoma-specific genes</i> , Molecular Medicine, No. 3-4: 85-95   |
| <i>BB</i> | 104       | Martin, K. et al (2001) <i>High-sensitivity array analysis of gene expression for the early detection of disseminated breast tumor cells in peripheral blood</i> Proceedings of National Academy of Sciences, Vol. 98, No. 5: 2646-2651  |
| EXAMINER  | <i>BB</i> | DATE CONSIDERED<br><i>5/13/07</i>  |

\*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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| USPTO Form 1449 U.S. Department of Commerce<br>Patent and Trademark Office  |   | Attorney Docket No.<br>204231/2055N |                  | Serial No.<br>10/812,707 |                 |          |                              |    |
|---|---|-------------------------------------|------------------|--------------------------|-----------------|----------|------------------------------|----|
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| U.S. PATENT DOCUMENTS   |   |                                     |                  |                          |                 |          |                              |    |
| Examiner Initial  |   | Patent No.                          | Date             | Name                     | Class           | Subclass | Filing Date (if appropriate) |    |
| JS  | A | 6,936,417                           | Aug. 30, 2005    | Orntoft                  | 435             | 6        |                              |    |
|   |   |                                     |                  |                          |                 |          |                              |    |
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| FOREIGN PATENT DOCUMENTS  |   |                                     |                  |                          |                 |          |                              |    |
| Examiner Initial  |   | Document No.                        | Publication Date | Country                  | Class           | Subclass | Translation                  |    |
|   |   |                                     |                  |                          |                 |          | YES                          | NO |
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|   |   |                                     |                  |                          |                 |          |                              |    |
| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)  |   |                                     |                  |                          |                 |          |                              |    |
|   |   |                                     |                  |                          |                 |          |                              |    |
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| EXAMINER  |   | 5/3/07                              |                  |                          | DATE CONSIDERED |          |                              |    |
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| **Copies of references not provided at the time of this submission.   |   |                                     |                  |                          |                 |          |                              |    |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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